

APPENDIX 3.10.2.

GUIDELINES ON THE DETECTION, CONTROL
AND PREVENTION OF *SALMONELLA*
ENTERITIDIS AND *S. TYPHIMURIUM* IN
POULTRY PRODUCING EGGS
FOR HUMAN CONSUMPTION

General Comments:

- *Salmonella* Enteritidis (SE) is a group D serotype salmonella known to contaminate the *internal* contents of shell eggs as compared to other *Salmonella* serotypes that cause illness in people; however, it is not the most common pathogen in the environment of chickens.
- *S. Typhimurium* (ST) is a group D serotype salmonella with little epidemiological association to salmonella illnesses associated with *internal* egg contamination. In highly controlled experimental conditions ST has been found in egg contents. However, ST is common contaminant in the environment of poultry houses.

Article 3.10.2.1.

Introduction

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S. Enteritidis and *S. Typhimurium* belong to the species of *S. Enterica*. In most food animal species, *S. Enteritidis* and *S. Typhimurium* can establish a clinically inapparent infection in poultry, of variable duration, which is significant as a potential zoonosis. Such animals may be important in relation to the spread of infection between flocks and as causes of human food [borne infection poisoning](#). In the latter case, this can occur when these animals, or their products, enter the food chain thus producing contaminated food products.

USA Comments – Terrestrial Animal Health Commission
March 2007 Report

Rationale: Given the context of these guidelines (bacterial contamination), we recommend the term “food borne infection” rather than “poisoning” be used in conjunction with the term ‘Salmonella’.

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Article 3.10.2.5.

Biosecurity recommendations applicable to pullet and layer flocks

1. ...
4. Poultry houses and buildings used to store feed or eggs should be pest proof ([such as rodents](#)) and not accessible to wild birds.

Rationale: The United States recommends adding the words “such as rodents” to distinguish these pests from ‘wild birds’.

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6. *Establishments* should be free from unwanted vegetation and debris. The area immediately surrounding the poultry houses ideally should consist of concrete or other material to facilitate cleaning. [An exception to this would be trees for heat control](#), with the exception of fruit trees which could be attractive to birds.

Comment: While the United States understands the recommendation for using trees as heat control, such trees also provide an excellent location for wild bird nesting, which may be an unacceptable hazard when in close proximity to an establishment. We recommend that this possibility be noted and leave room for other options.

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Article 3.10.2.6.

Recommendations applicable to egg hygiene and collection

USA Comments – Terrestrial Animal Health Commission
March 2007 Report

1. ...
4. Eggs should be stored in a cool and dry room used only for this purpose. Storage conditions should minimise the potential for microbial contamination and growth. The room should be kept clean and regularly sanitised. [If available, refrigeration of shell eggs is recommended.](#)

Comment: The United States recommends adding the text as indicated.

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Article 3.10.2.8.

Control measures

Salmonella control can be achieved by adopting the management practices mentioned above in combination with the following measures. No single measure used alone will achieve effective *S. Enteritidis* and *S. Typhimurium* control.

Currently available control measures are: vaccination, *competitive exclusion*, flock *culling* and product diversion to processing. [Antimicrobials](#), [Competitive exclusion](#) and live vaccination are used in elite [\(pedigree and great-grand parent\)](#) flocks.

Antimicrobials are not recommended to control *S. Enteritidis* and *S. Typhimurium* in poultry producing eggs for human consumption because the effectiveness of the therapy is limited; it has the potential to produce residues in the eggs and can contribute to the development of antimicrobial resistance.

Comment: The use of antimicrobials in elite (pedigree and great- grand parent) flocks is not recommended for the control of *S. enteritidis* and *S. typhimurium*.

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